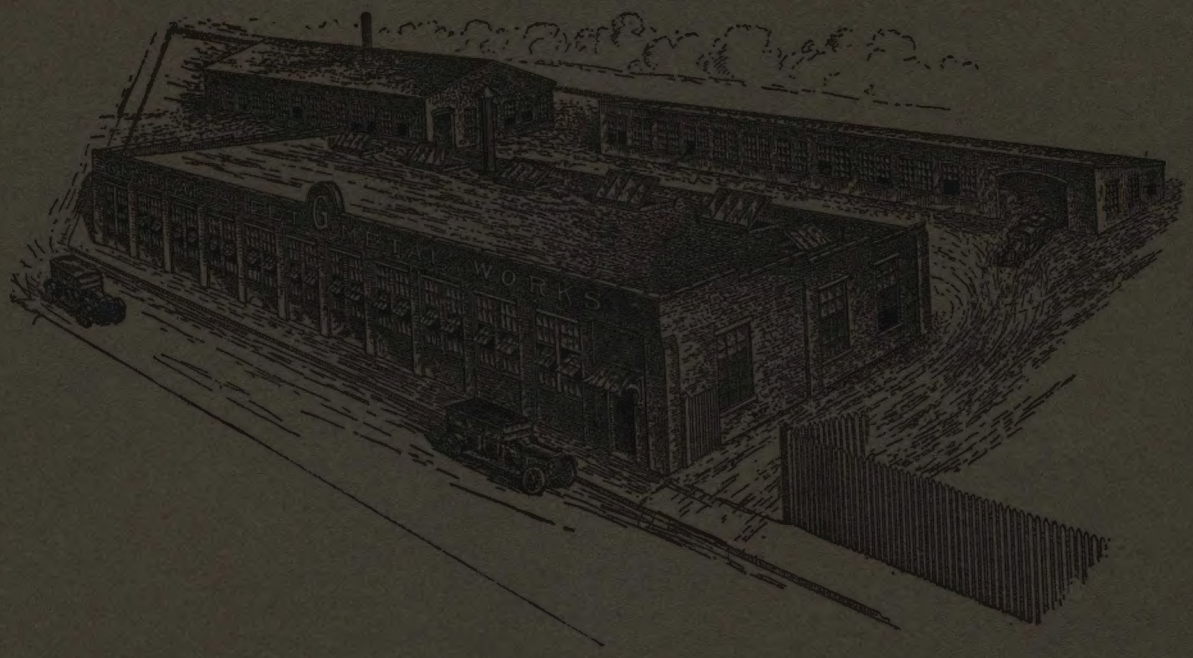
Dr. C
No. 515
Date 10/1/25

A. I. A. Classification No. 12 j1

A
TEXT BOOK—CATALOGUE
ON
CIBULAS SKYLIGHTS



A. I. A. Classification No. 12 j1

GENERAL
SHEET METAL WORKS

120 SILLIMAN AVENUE BRIDGEPORT, CONN.

TD CAT 1922 General Sheet...
ATHENAEUM OF PHILADELPHIA

This
TEXTBOOK-CATALOGUE
Explains

The General Construction of "CIBULAS" Skylights. The various Types of "CIBULAS" Skylights. The Reasons for and the Proper Uses of Each Type.

and gives

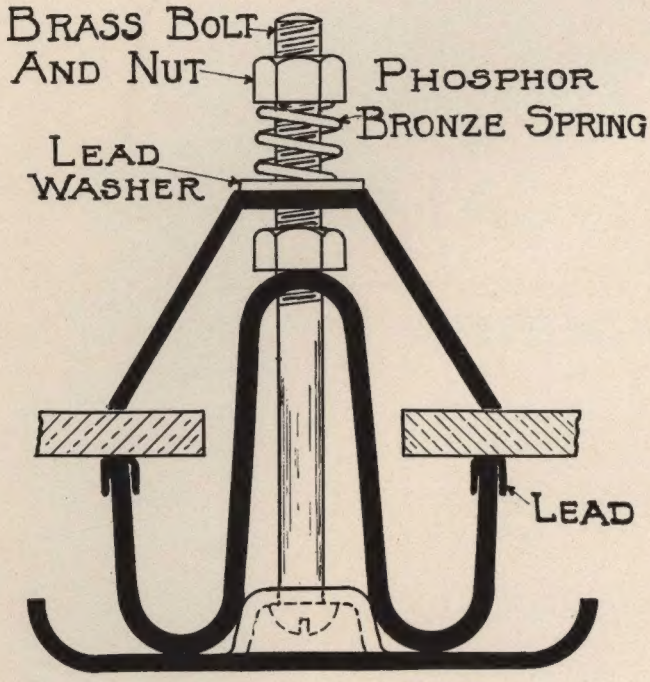
Data required for Estimates on Skylights. Together with other Useful Information for Designers and Users of Skylights.

Published By

GENERAL
SHEET METAL WORKS

120 Silliman Avenue. Bridgeport, Conn.

The General Construction of "Cibulas" Skylights



Cross Section of "Cibulas" Bar.

"CIBULAS" Skylights are composed of a number of Ribs or Bars, properly spaced, and fastened securely to the framings of the skylights. These Bars are built up in three separate pieces; the SWEAT GUTTER, the INTERMEDIATE PIECE, and the CAP. Each part is made of Aluminum, Copper, Galvanized Iron or other Rust-Resisting Metal and is assembled with Brass Bolts and Nuts, Phosphor Bronze Springs and Lead Washers to make a Bar that will withstand corrosion under the most severe atmospheric conditions.

Every Part Essential

The SWEAT GUTTERS on Cibulas Skylights are made large enough to carry away all moisture due to heavy condensation and are designed so as to prevent the accumulation of dust or dirt.

The INTERMEDIATE PIECE is bolted to the Sweat Gutter by means of 5/16 Brass bolts and nuts. This Piece forms the resting place or bed for the Glass.

The CAP is slipped on over the bolts, which project about 2" above the Intermediate Piece. Between the Cap and Nut a Lead Washer and a Phosphor Bronze Spring is fixed. This allows the Cap to be screwed down with enough pressure to seat the glass firmly and yet give the necessary flexibility to withstand vibration and allow for expansion and contraction.

"CIBULAS" Skylights are not carried in stock but are built to suit the conditions of the building. The size of the Bar is determined by the length of the span. If galvanized iron is used it is never less than 16 or 18 gage. Where the span is extra large, purlins must be provided for Intermediate Support. "Cibulas" Skylights are strong enough to support the weight of the heaviest snowloads, or from 35 to 50 pounds per square ft.

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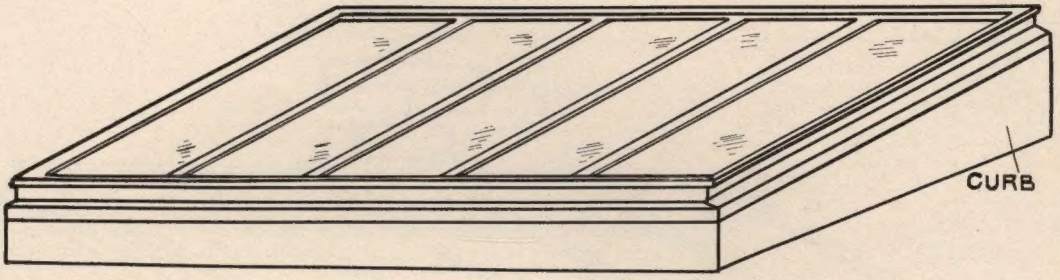
General...

Flat or Single Pitch Skylight



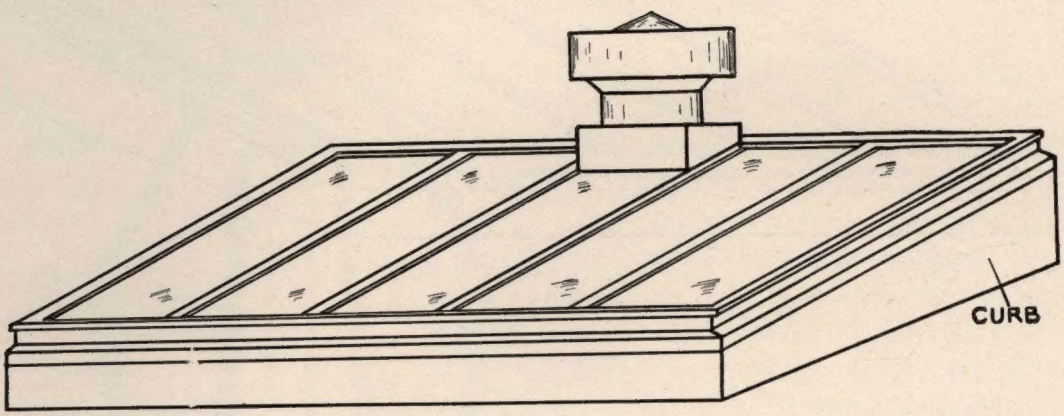
This type of Skylight is designed for use over large rooms having plenty of ventilation but little light. It is adaptable to either a flat or a steep roof.

The Ribs of the Skylight may run lengthwise or crosswise but they must run with the pitch of the roof. The size of the Skylight is governed by the outside dimensions of the Curb and can be made any size.

The Curb is built of wood, concrete, steel etc., and it should have an elevation of at least 6 or 8 inches from the roof.

If the Curb is over 8 feet wide a purlin is to be provided to take care of the increased span of the Ribs which support the glass.

Flat or Single Pitch Skylight with a Round Storm-Proof Ventilator



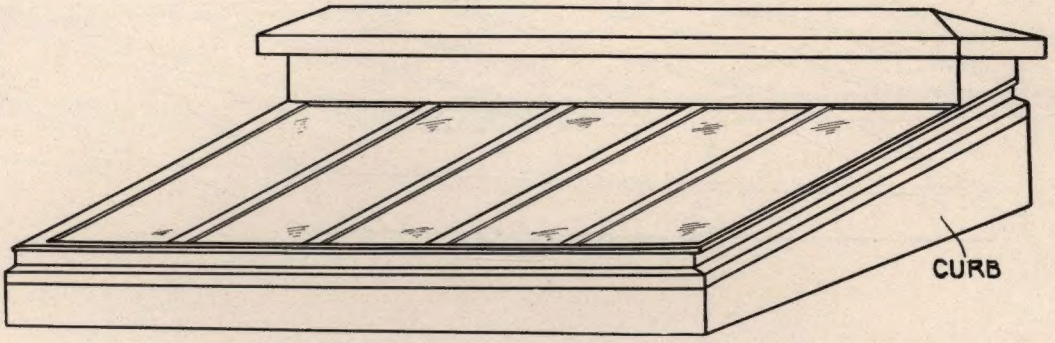
This Skylight is adaptable over offices, lavatories and other rooms where varying climatic conditions must be amply provided for.

The Ventilators are equipped with dampers which may be regulated to suit the prevailing temperature.

These Ventilators are made in all sizes, the size being determined by the number of people in the room.

This Skylight may be made in any size. If it is over 8 feet a purlin is to be provided to take care of the increased span of the Ribs which support the glass.

Flat or Single Pitch Skylight with Ridge Type Ventilator

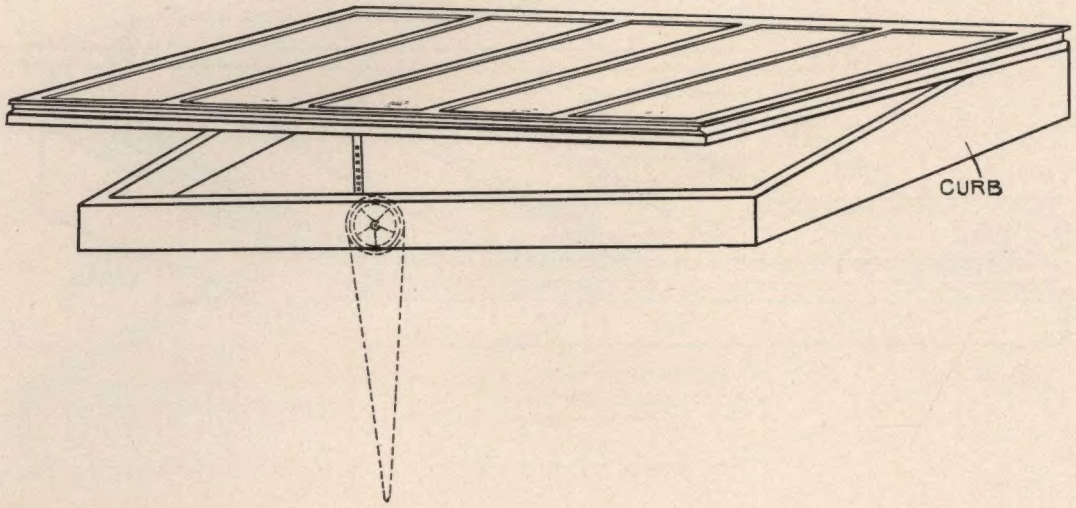


The Skylight illustrated above is equipped with a Ridge Type Ventilator and is especially appropriate over work rooms, where ventilation is as essential as light.

The Ridge Type Ventilator runs the entire length of the Skylight and is provided with dampers for the regulation of cold air.

This Skylight may be made in any size. If it is over 8 feet a purlin is to be provided to take care of the increased span of the Ribs which support the glass.

Flat or Single Pitch Skylight with Automatic Lift

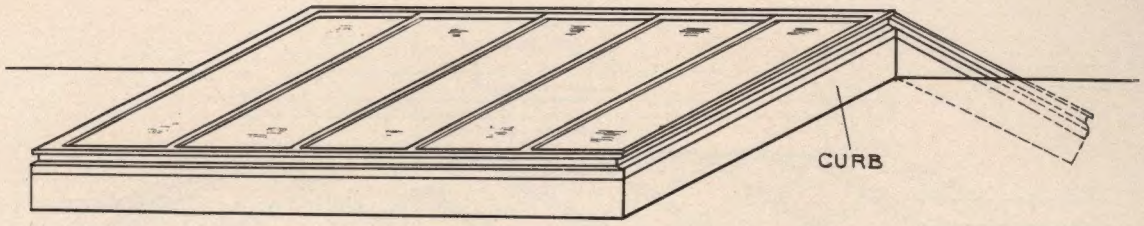


We suggest this Skylight for use over rooms where there is excessive gas or smoke and adequate means must be provided for proper ventilation.

This Skylight is built as large as 10'-0" x 10'-0" and is equipped with an Automatic Lift, so constructed that it will hold the Skylight in any position without danger of dropping. The Lift is operated from the floor and is so easy to operate that a child may raise or lower it.

In severe or stormy weather the Skylight may be lowered sufficiently to prevent the snow or rain from entering the building.

Double Pitch Skylight

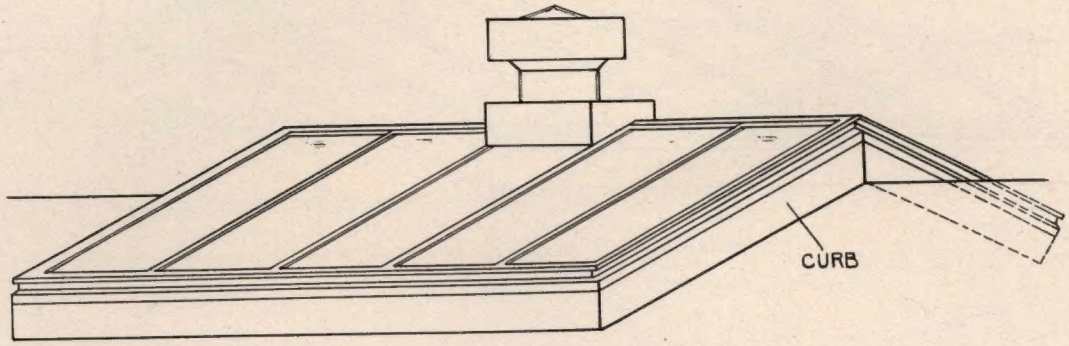


We recommend the above illustrated Skylight for use on Ridge Roofs over rooms having plenty of ventilation but little or no light.

The advantage of using this type of Skylight in such cases can readily be seen. It throws the light to both sides of the room.

This Skylight may be built any size to suit prevailing conditions—its size being determined by the outside dimensions of the curb.

Double Pitch Skylight with Round Storm-Proof Ventilator

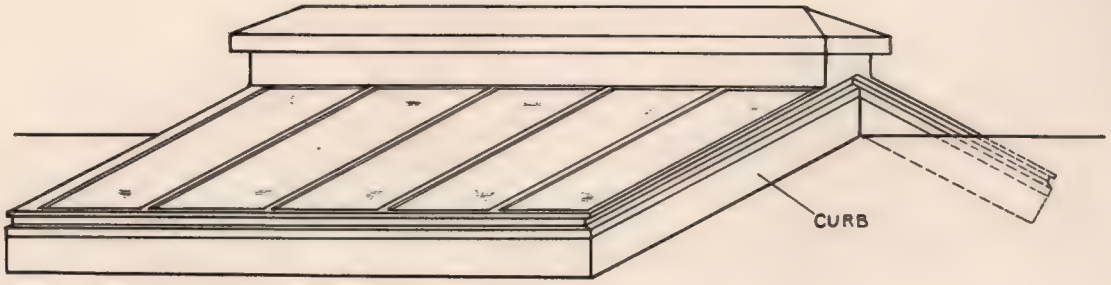


The Skylight shown above is equipped with a Round Storm-Proof Ventilator and is suitable for use on a Ridge Roof over rooms where light is the chief requisite but some ventilation is necessary. The size of the Ventilator is determined by the number of people and the conditions within the room.

The Ventilator is provided with dampers to regulate the cold air.

This Skylight may be built to any size—the size being governed by the outside dimensions of the curb.

Double Pitch Skylight with Ridge Type Ventilator

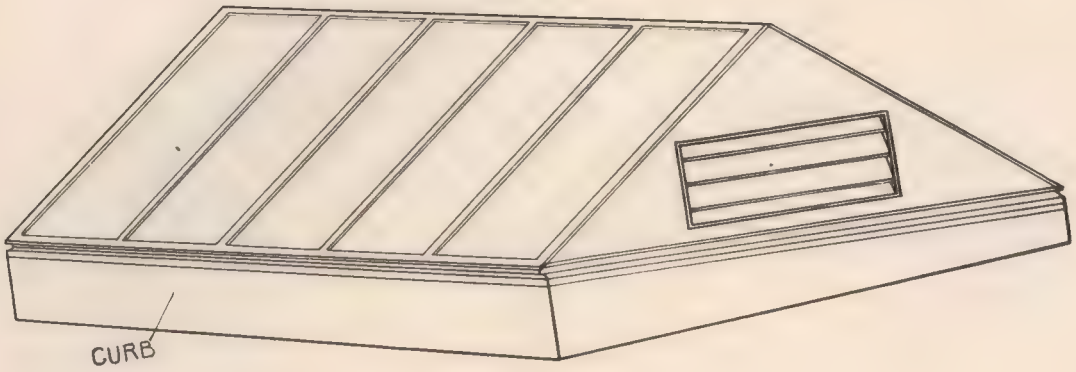


The above illustrated Skylight is designed for use on Ridge Roofs over rooms where light and ventilation are equally important.

The Ridge Type Ventilator runs the entire length of the Skylight and permits a larger opening than the Round Ventilator, making a greater circulation of air possible. However, this type of Ventilator covers more space than the Round Ventilator, thereby lessening the glass area and shutting off more light.

This Ventilator, as are all other Ventilators, is provided with dampers to regulate the cold air.

Double Pitch Skylight with Louvres In Ends

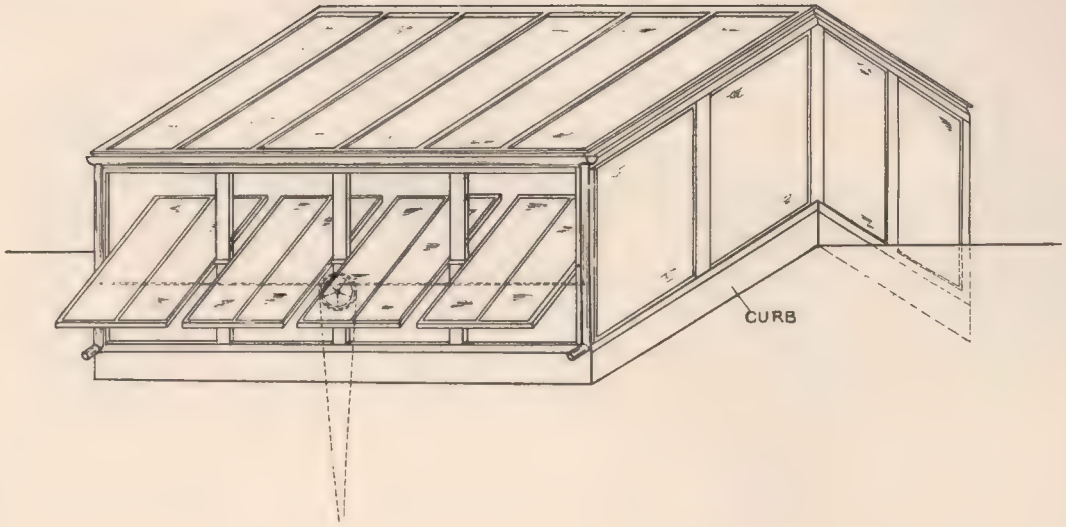


This Skylight is approved for use on roofs having a limited space for openings, over rooms where the maximum of light and ventilation is essential.

In this type the ventilation is provided by Louvres in both ends of the Skylight. This allows the entire glass area to be utilized for the admittance of light and yet permits the proper amount of ventilation.

The Louvres in these Skylights may be made movable or stationary and can be operated from the floor level by a chain or cord.

Double Pitch Turret Skylight with 100% Ventilation



On Ridge Roofs, over rooms requiring the greatest possible amount of light and ventilation, especially over foundries, garages, plating rooms, boiler rooms, etc., we advise the use of this Skylight.

The two long sides are equipped with Pivoted Sash, operated by "CIBULAS" Pressed Steel Sash Operators. The Sash may be operated from the floor level and can be opened to any position.

This Skylight may be built to any size to suit conditions. If the size of the Skylight runs over fourteen feet across gable openings, it should have steel or wood supports.

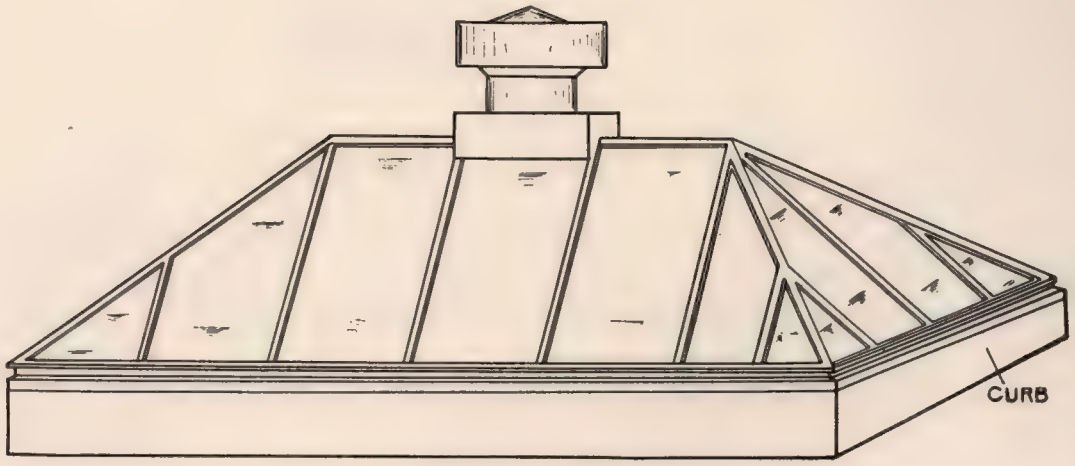
Plain Hipped Skylight

The Plain Hipped Skylight is built for use on flat roofs, over well ventilated but poorly lighted rooms. It is especially recommended for use over elevator shafts.

The Skylight has glass on all four sides so that light is thrown into a room from four directions.

This Skylight can be built to any size. Should specifications call for a Skylight wider than fourteen feet, a steel or wood support must be provided.

Plain Hipped Skylight with Round Storm-Proof Ventilator

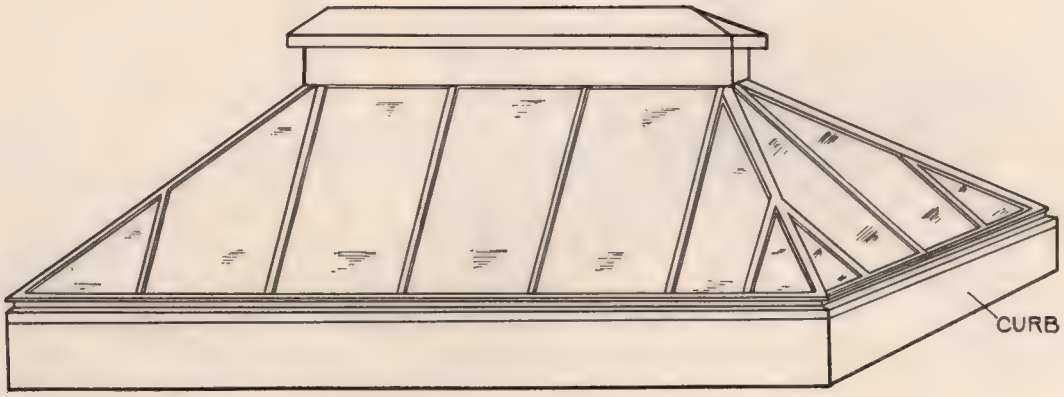


This Skylight is provided with a Round Storm-Proof Ventilator. It is adaptable for use on a Flat Roof, over rooms where light is the first requirement but some ventilation is necessary.

The size of the ventilator is governed by the number of people and the conditions within the room and it is equipped with a damper.

This Skylight may be built to any size. If the span is over fourteen feet, supports of steel or wood must be provided.

Plain Hipped Skylight with Ridge Type Ventilator

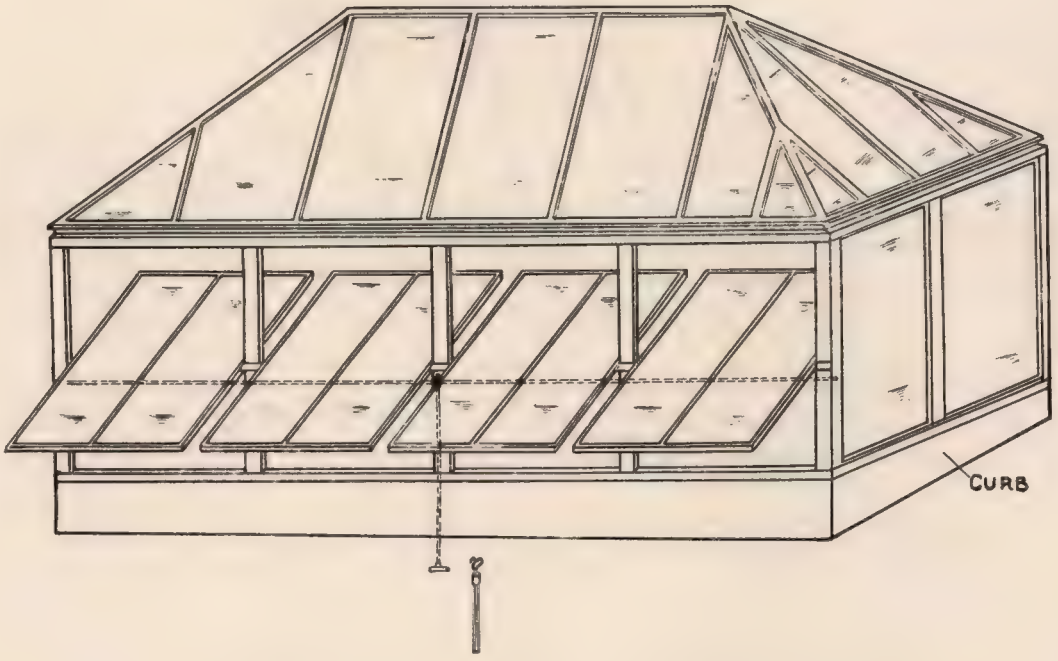


In cases where more ventilation is needed than is provided by the Round Ventilator, the Plain Hipped Skylight with the Ridge Type Ventilator can be used to advantage. But, as you will note, this Ventilator covers the Ridge of the Skylight and takes away a portion of the glass area, which lessens the amount of light obtainable.

This Ventilator is equipped with a damper which may be controlled from the floor level.

If the span is over fourteen feet, wood or steel supports are to be provided.

Hipped Turret Skylight with 100% Ventilation

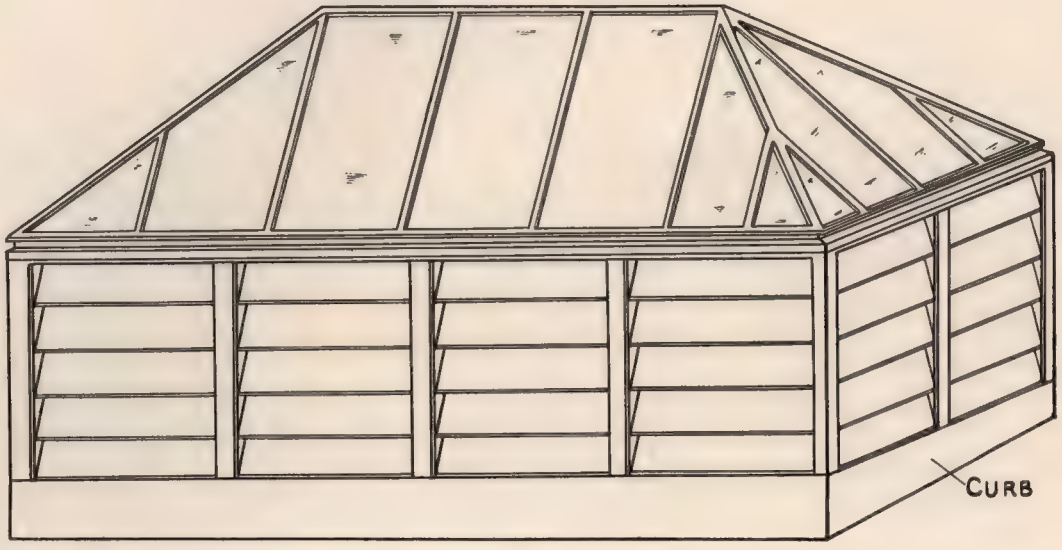


Over public places, boiler rooms, plating rooms, factories, etc., where the greatest possible amount of ventilation must be secured without any sacrifice of light, we suggest the use of the above Skylight.

The two long sides are provided with pivoted windows. They are operated with "CIBULAS" devices, permitting the sash to be held in any desired position. These devices are controlled from the floor by means of a pole and hook or chain.

The height of the Turret is usually governed by the size of the Skylight opening.

Hipped Louvre Turret Skylight with 100% Ventilation



Over forge shops, air shafts, light courts, and other places where there is excessive gas to contend with, the Louvre Turret Skylight may be used successfully.

This Skylight can be open day and night without any danger of rain or snow driving in.

The Louvres are made movable or stationary and each section may be controlled individually by a chain, or operated in units by means of "CIBULAS" Pressed Steel Sash Operators.

The Skylight may be built to any size to suit prevailing conditions. If the span is over fourteen feet a steel or wood support must be provided.

"Cibulas" Sawtooth Skylights

We call your attention to the illustrations of Sawtooth Skylights shown on the following pages.

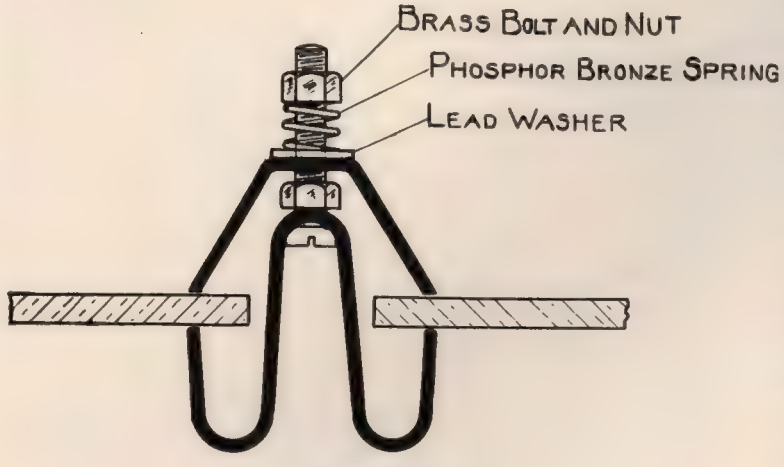
These Skylights have been designed by men who have spent 25 years studying and analyzing the action of the elements upon Skylights. This has necessitated their being on the roof in all kinds of weather, not only during the construction of a Skylight but after its erection. "CIBULAS" Sawtooth Skylights are the result of the knowledge and practical experience of these men.

Experience has taught us that the method of supporting the glass is of first importance in the construction of a perfect Skylight, and that if the glass is properly supported in the center as well as on the ends there will be no danger of breakage.

To obtain the proper support in the center, the Bars must be strong enough to withstand a safe load of from 35 to 50 pounds per square foot. If the Bars are not strong enough to sustain this pressure they sag in the center, causing continual glass breakage.

In order to prevent sagging Bars under heavy snow or wind pressure, we have found it advisable not to standardize on the size of the Bar, but to construct the Bar in proportion to the length of the span.

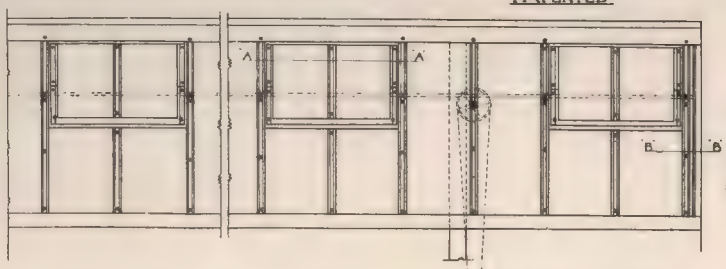
We refer you to the cross-section drawing of the "CIBULAS" Rib. Each part is made of galvanized, rust-resisting metal of at least 16 or 18 gage, assembled with brass bolts and nuts, phosphor bronze springs, and lead washers. Water that is collected or absorbed, freezes in cold weather and causes continual glass breakage. You will note that there is no place in our construction where water can be absorbed or collect for any length of time. Every part has been given the most careful consideration so that the "CIBULAS" Bar will outlast any painted Bar twice its thickness.



SECTION OF BAR

CIBULAS SAW TOOTH SKY-LIGHT

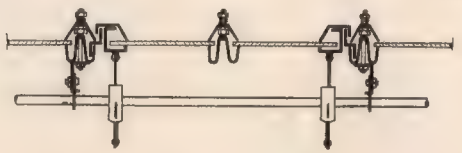
PATENTED



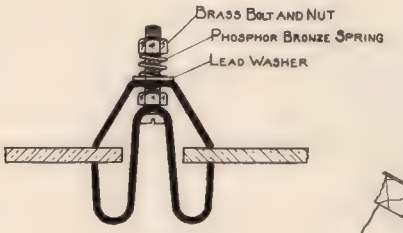
VENTILATING SECTIONS MAY BE PLACED IN EACH BAY OR OTHERWISE AS DESIRED

ELEVATION OF SAWTOOTH

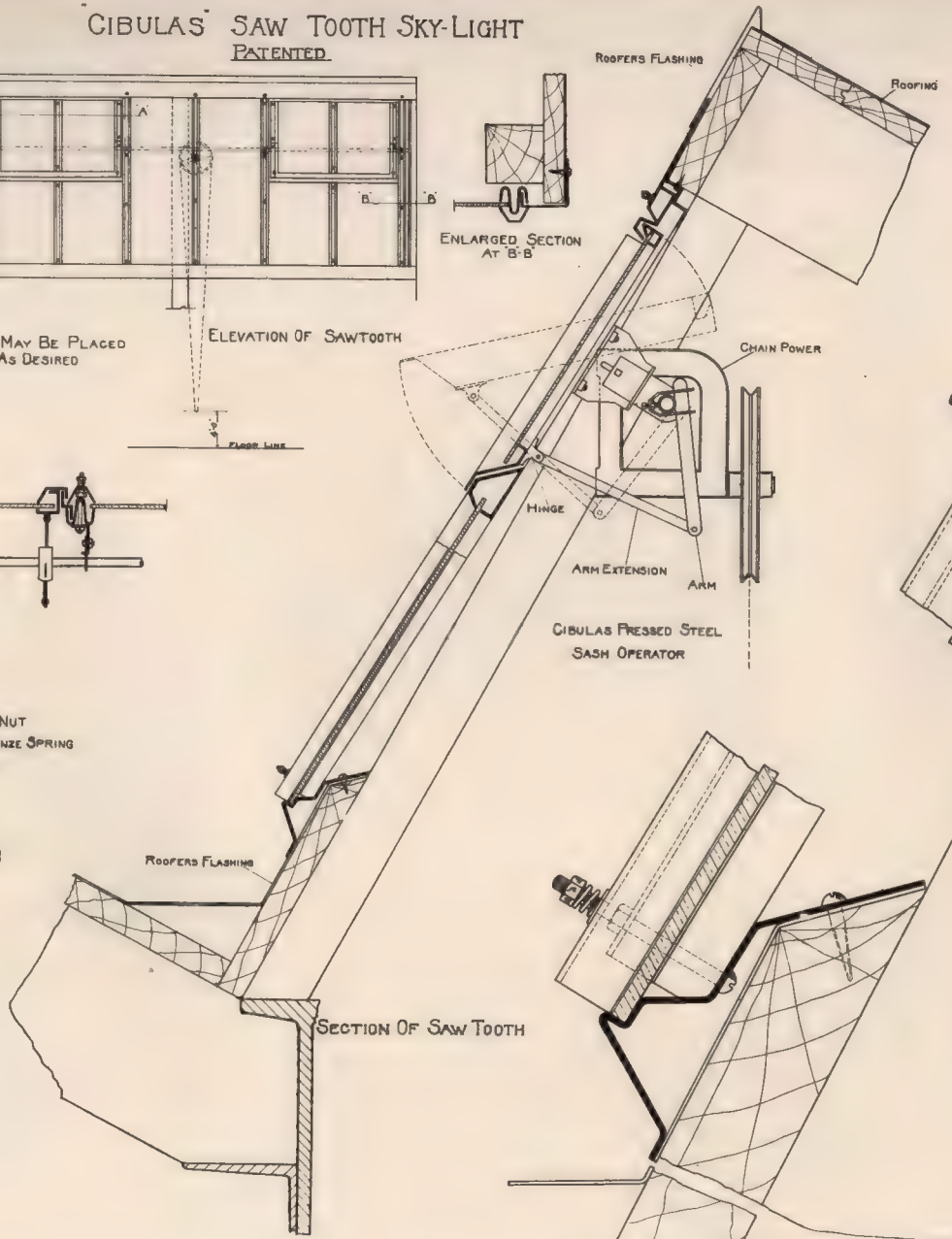
ENLARGED SECTION AT B-B



SECTION AT A A

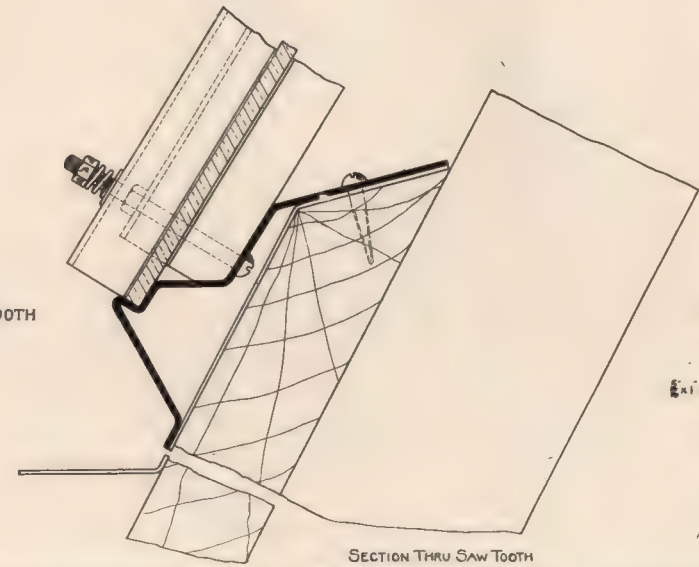


SECTION OF BAR

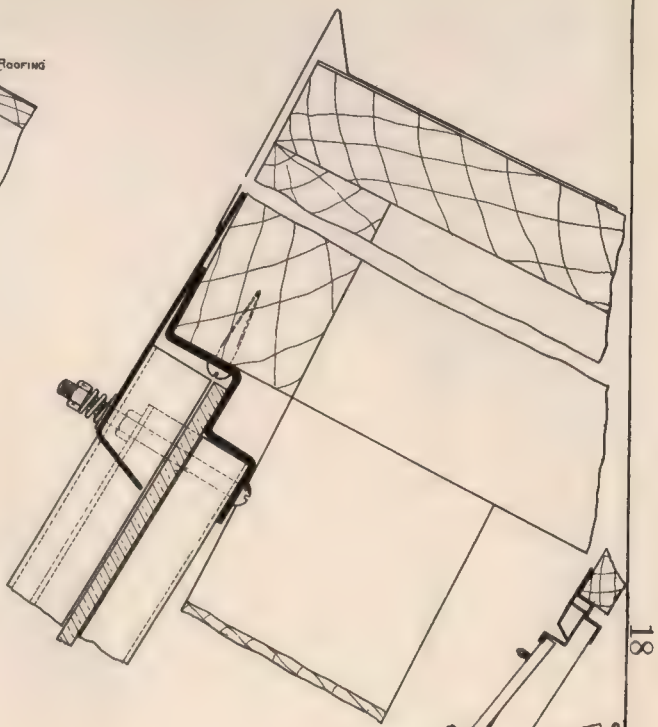


CIBULAS PRESSED STEEL SASH OPERATOR

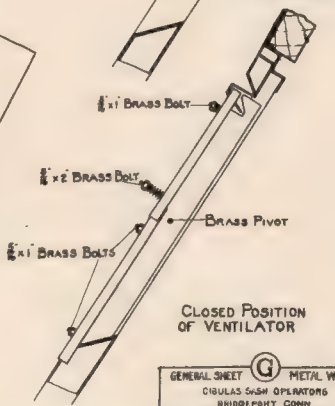
SECTION OF SAW TOOTH



SECTION THRU SAW TOOTH



OPEN POSITION OF VENTILATOR



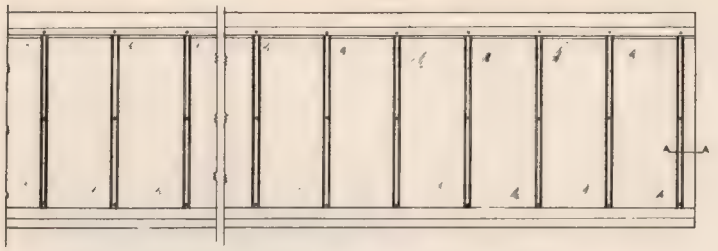
CLOSED POSITION OF VENTILATOR

GENERAL SHEET METAL WORKS
CIBULAS SASH OPERATORS
BRIDGEPORT CONN

DRAWING

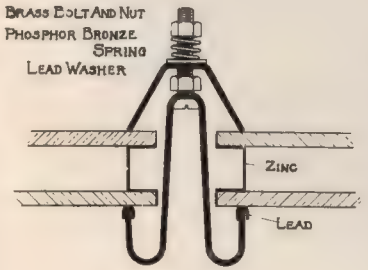
"CIBULAS" DOUBLE GLAZED SAW TOOTH SKY LIGHT

PATENTED

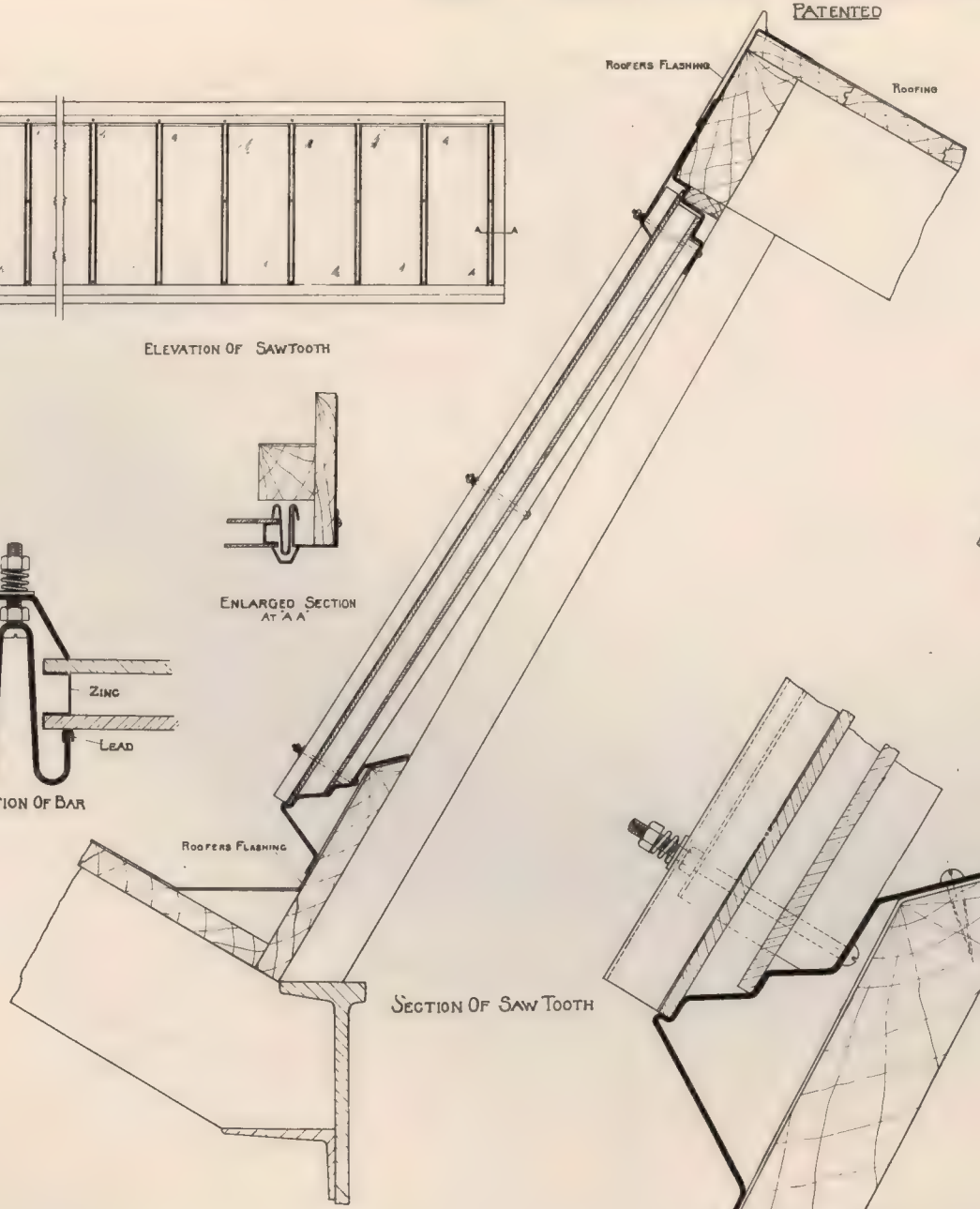


ELEVATION OF SAWTOOTH

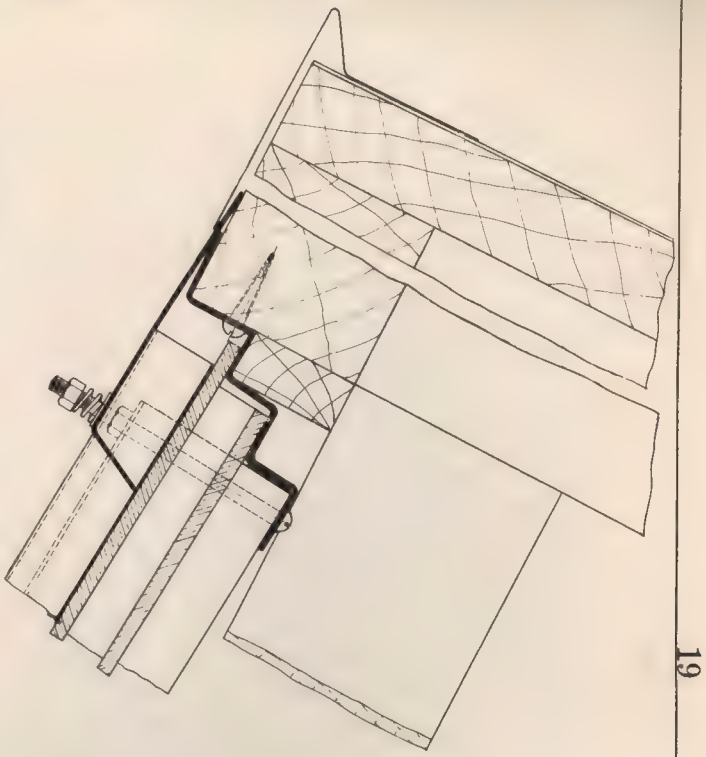
ENLARGED SECTION AT "A A"

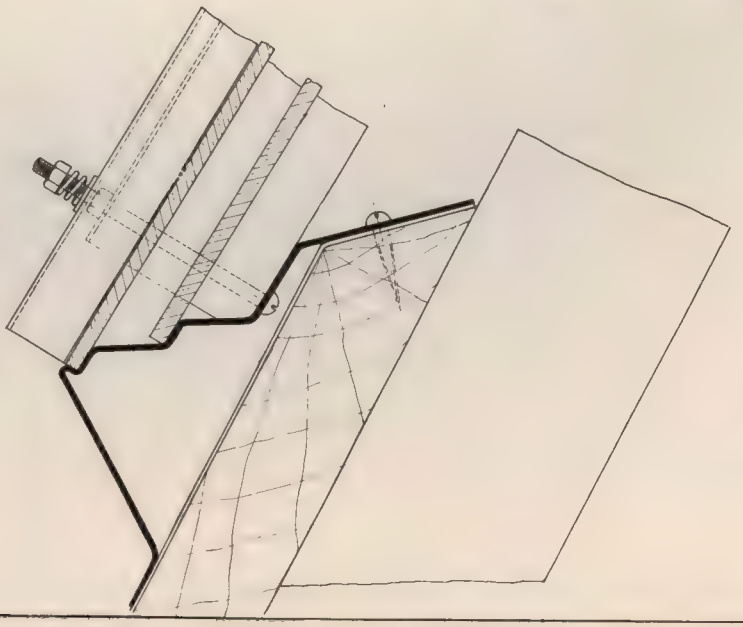


SECTION OF BAR



SECTION OF SAW TOOTH





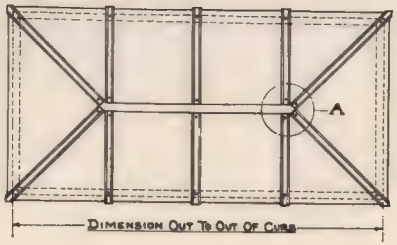
SECTION THRU SAW TOOTH

GENERAL SHEET METAL WORKS
CIBULAS SASH OPERATORS
BRIDGEPORT CONN

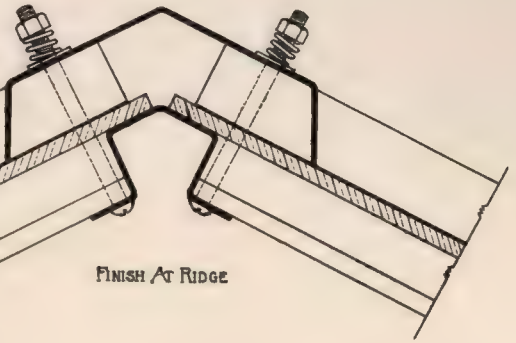
DRAWING

19

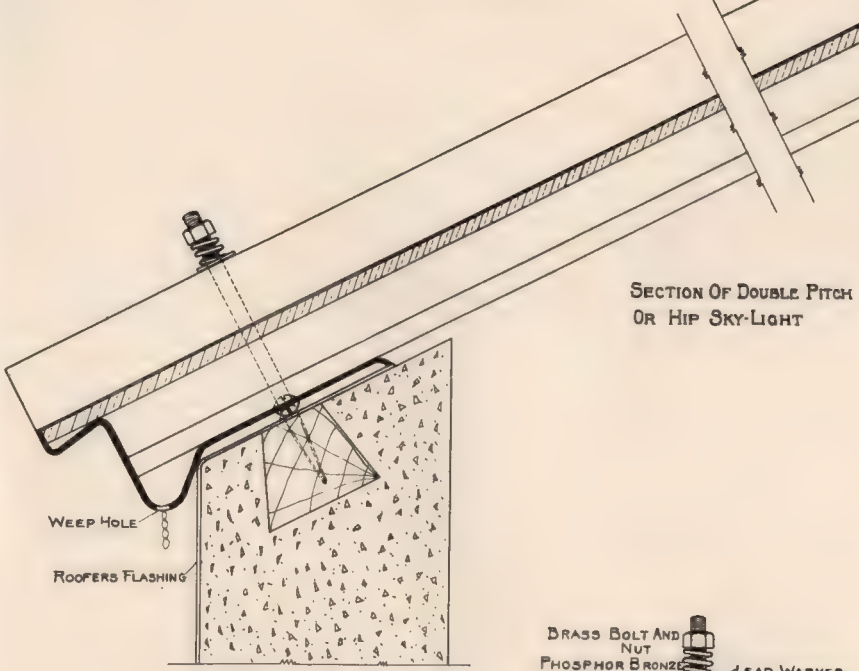
Details Of Cibulas Hip Or Double Pitch Sky-Lights



Plan Of Hip Sky Light

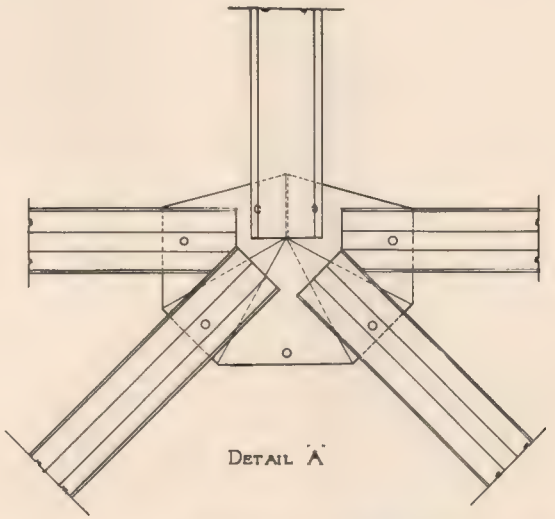


Finish At Ridge

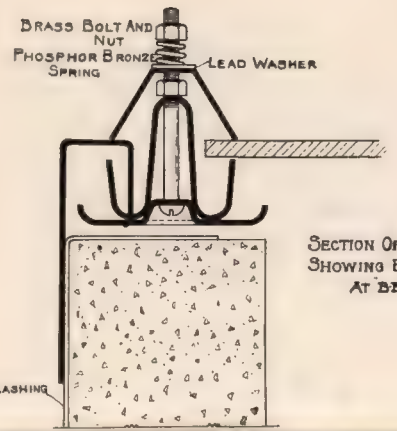


Section Of Double Pitch
Or Hip Sky-Light

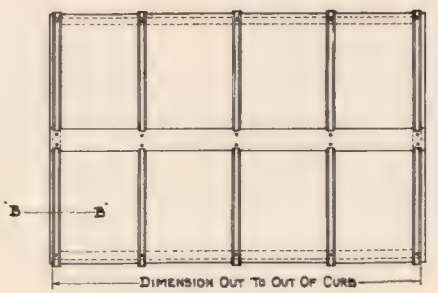
Finish At Curb



Detail 'A'



Section Of Bar
Showing End Finish
At BB



Plan Of Double Pitch Sky-Light

General Sheet Metal Works
Cibulas Sash Operators
Bridgeport Conn

DRAWING

Drawn By F.G.E. Traced By F.G.E. Marshall

SEAMLESS RUBBER COMPANY, New Haven, Conn.

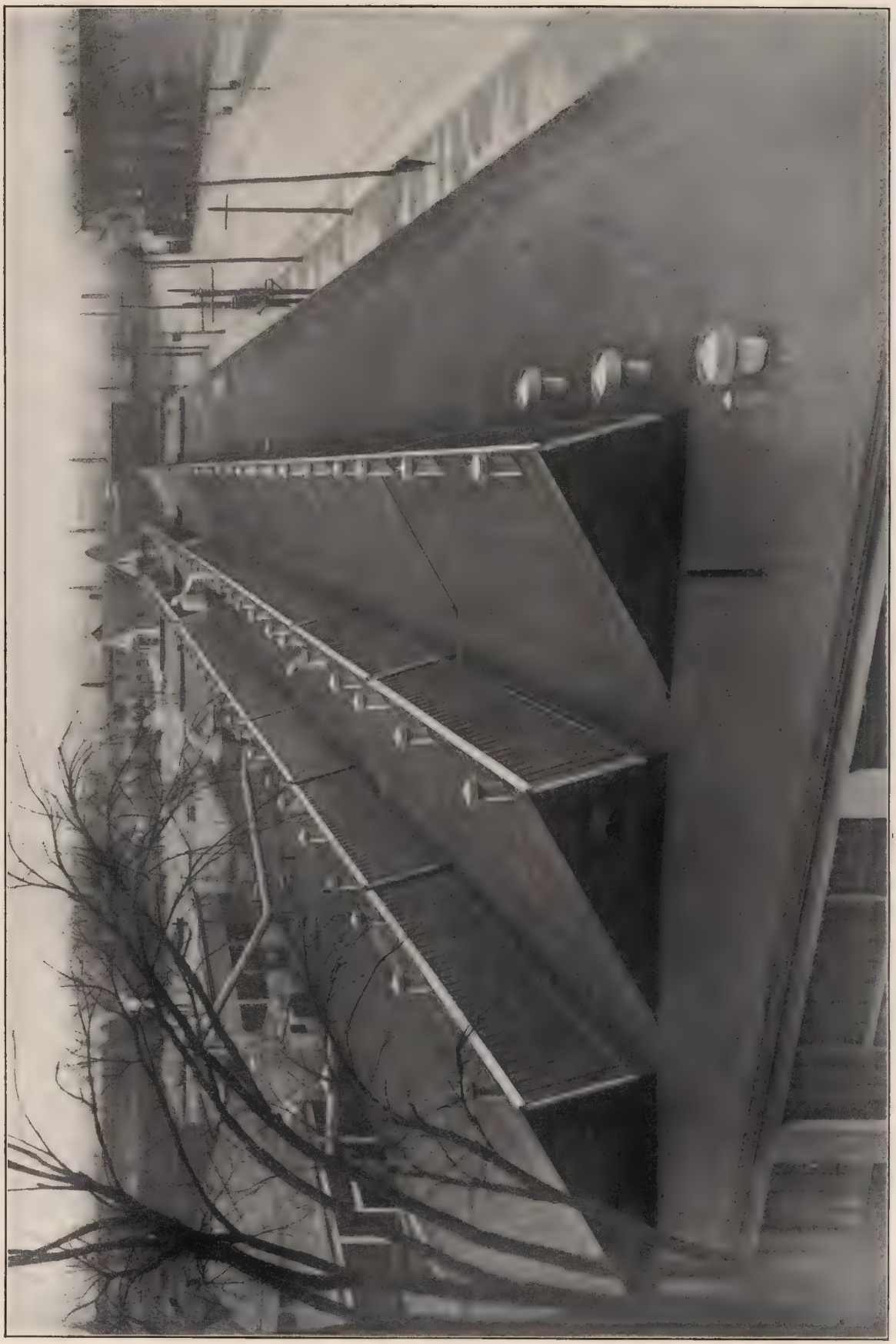
COLTS PATENT FIREARMS COMPANY, HARTFORD, CONN.

This illustration shows a perfect Sawtooth construction. You will notice that there is a Pivoted Ventilating Section in every third light. (This location may be changed.)

These sash are controlled by "CIBULAS" Pressed Steel Sash Operators, allowing the Sash to be opened to any desired degree, thus giving a greater circulation of air.

J. AND J. CASH, INC., SOUTH NORWALK, CONN.

This illustration shows the proper method of pivoting the Sash. By swinging the Sash half outward a very small portion of the sun's rays are received, so that the room remains much cooler.

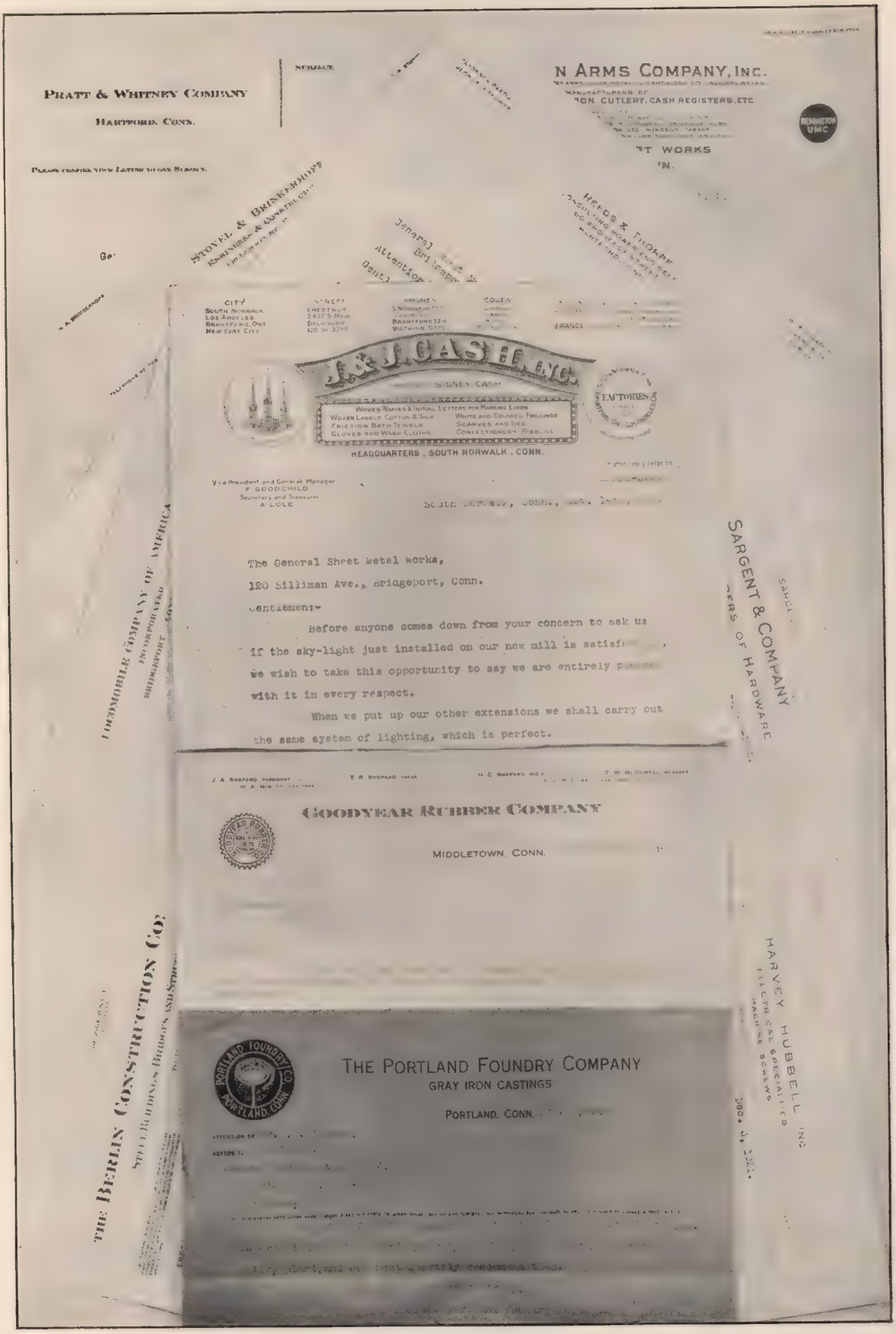


HARVEY HUBBELL COMPANY, BRIDGEPORT, CONN.
This Sawtooth Skylight illustrates another method of providing ventilation.
The size and number of Ventilators is determined by the number of people and the conditions in the room.

PRATT & WHITNEY COMPANY, HARTFORD, CONN.

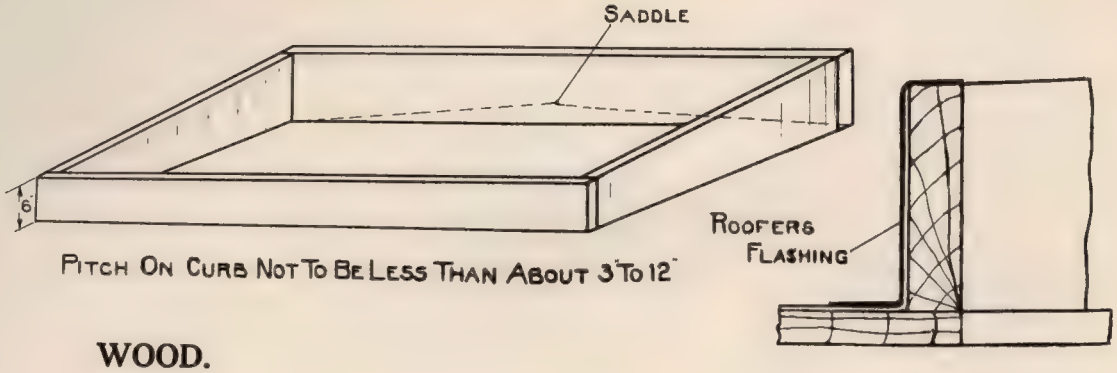
The picture shown above illustrates short Skylights with proper ventilation.
The Sash of the Ventilators may be made of steel or wood and are not furnished under the Skylight contract.
The Ventilators are operated by "CIBULAS" Sash Operating Devices.

CORNWALL & PATTERSON, Bridgeport, Conn.



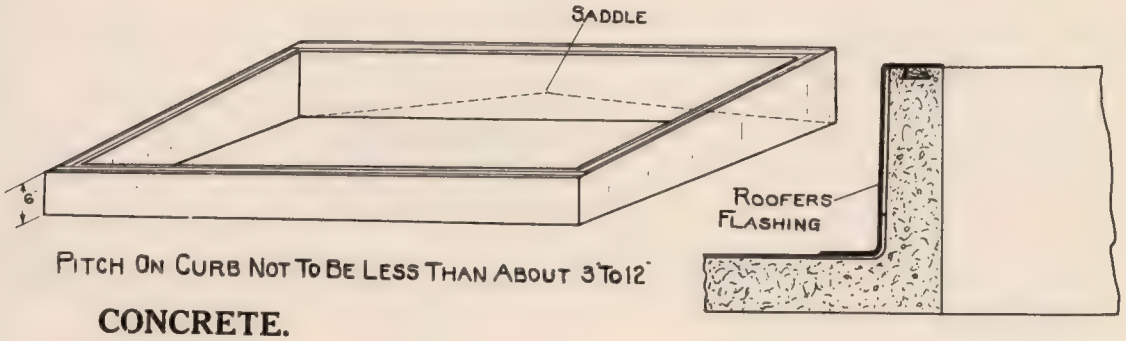
A Few Testimonials From Some of Our Users.

Details for Building Curbs for Flat or Single Pitch Skylights



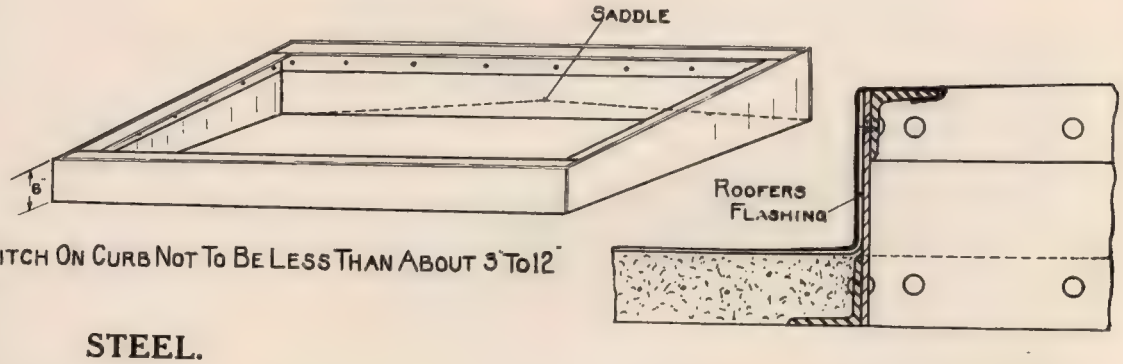
PITCH ON CURB NOT TO BE LESS THAN ABOUT 3" TO 12"

WOOD.



PITCH ON CURB NOT TO BE LESS THAN ABOUT 3" TO 12"

CONCRETE.

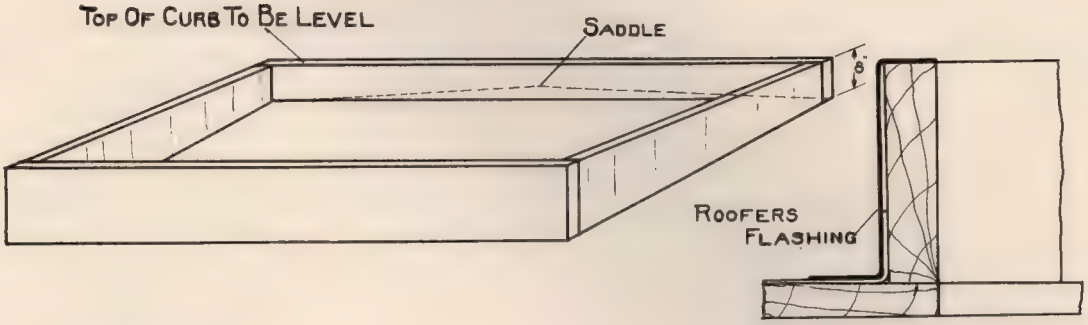


PITCH ON CURB NOT TO BE LESS THAN ABOUT 3" TO 12"

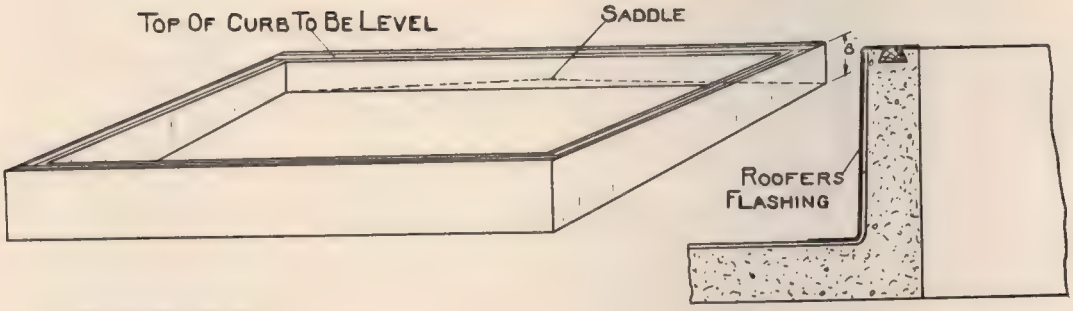
STEEL.

If the Span is over 8 feet, a steel or wood Purlin is to be provided.

Details for Building Curbs for Hipped or Turret Types of Skylights



WOOD.



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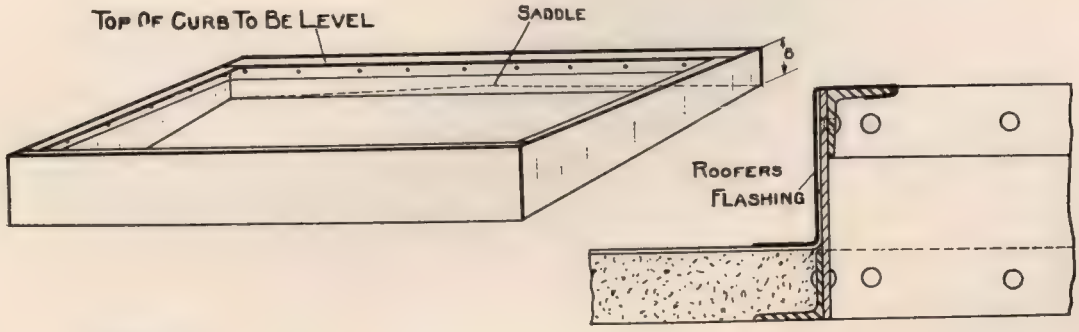

STEEL.

Data Required for Estimating Skylights

When estimates are desired on Skylights the following data is essential:

Number of Skylights, Style (Single or Double Pitch, Hip, etc.)

Dimensions of Areas to be Glazed for each Skylight.

Pitch of Glass (or rise per Lineal Foot.)

Kind and Size of Curbs. Kind and Size of Purlins (if any).

Distance between Curbs and Purlins. (8' Max.)

Distance between Purlins. (8' Max.)

Kind and Thickness of Glass Desired.

Kind and Weight of Material to be Used.

Kind of Roofing to be Used.

(Always take note of scale on Blueprints.)

Most of this information can be obtained from the roof plans, elevations, vertical cross section, and detail drawings. If available, we should be pleased to have them forwarded at our expense. They will be returned promptly, if desired.

ENGINEERING SERVICE.

This Textbook-Catalogue has been designed to thoroughly cover the field of Skylight Construction.

We have endeavored to illustrate and describe the various types of Skylights for use under general conditions. However, conditions arise which require special designs. For this purpose we maintain an Engineering Department that is at the service of designers and users of Skylights.

Architects will find it helpful to make use of this Department when preparing plans or estimates.

Our Engineers are experienced men who are capable of designing Skylights and of furnishing complete detailed drawings for same.

The service is free and without obligation.

Useful Information

The best rule in estimating the maximum size for a Skylight is to take one-third of the Area of the Room which is to be lighted,—however, in many instances a smaller Skylight will answer the purpose.

The reason Sawtooth Skylights are built facing North is to keep the rays of the sun out of the room.

To keep out the sun's rays in other types of skylights paint the underside of glass with a light solution of White Paint.

A Skylight should have a pitch of at least 3 " per foot to take care of condensation.

Curbs must have flashings on before Skylight can be erected.

Curbs for Skylights must always be built square.

The approximate weight of a Galvanized Iron or Copper Skylight is 8 pounds per square foot.

Aluminum Skylights weigh approximately 2 pounds less per square foot than Copper or Galvanized Iron Skylights; they cost less than copper and are just as durable.

"CIBULAS" Skylights can be furnished with rough or ribbed glass, either plain or wired in both the ordinary glass and the actinic glass.

Actinic Glass excludes 85% of the ultra-violet (injurious) rays, and 55% of the infra-red (heat) rays. These are the invisible solar-chemical rays that are so destructive to rubber fabrics and are fatiguing to the eye.

Always inspect glass when received in broken boxes or when boxes are received upside down.

Do not put too many lights of glass in one pile.

Proper sizes of glass are 16 ", 18 ", 20 " and 22 "—not over 72 " long.

Extract from the Rules and Requirements of National Board of Fire Underwriters, Edition of 1906:

> "Thickness of glass: wire glass to have a thickness of at least ¼ " at the thinnest point.
>
> Size of glass: the unsupported surface of the glass allowed, shall be governed by the severity of exposure and be determined in each case by the Underwriters having jurisdiction, but in no case shall it be more than 48 " in either dimension or exceed 720 square inches."

Wire guards under and over Skylights to be approximately 14 gage, 1 " mesh.

A Few Installations of "Cibulas" Skylights

Aeolian Company, Meriden, Conn.
Aetna Nut Company, Southington, Conn.
American Hosiery Company, New Britain, Conn.
Armstrong Mfg. Company, Bridgeport, Conn.
Atlantic Carton Company, Norwich, Conn.
American Tube & Stamping Co., Bridgeport, Conn.
Adams Building, 88 North St., Greenwich, Conn.
Chas. M. Ams, Gray Oaks, Yonkers, N. Y.

Belknap Mfg. Company, Bridgeport, Conn.
H. E. Bidwell Service Station, Hartford, Conn.
Bilton Machine Tool Co., Bridgeport, Conn.
W. B. Blackman, Danbury, Conn.
F. L. Bradbury, Bridgeport, Conn.
A. W. Bonnetti's Garage, Hartford, Conn
Bissell Varnish Company, Bridgeport, Conn.
Bush Mfg. Company, Hartford, Conn.
Bullard Machine Tool Co., Bridgeport, Conn.
Bear Creek Coal Co., Bearcreek, Mont.
Bridgeport Boiler Works, Co., Bridgeport, Conn.
Bridgeport Brass Co., Bridgeport, Conn.
Bridgeport Metal Goods Mfg. Co., Bridgeport, Conn.
Bryant Electric Company, Bridgeport, Conn.
Bristol National Bank, Bristol, Conn.
Bridgeport Embroidery & Borgul Co., Bridgeport, Conn.

J. and J. Cash Company, Norwalk, Conn.
Clark Biscuit Co., North Adams, Mass.
Colts Patent Fire Arms Co., Hartford, Conn.
Columbia Graphophone Co., Bridgeport, Conn.
Connecticut Web and Buckle Co., Bridgeport, Conn.
Cornwall & Patterson Mfg. Co., Bridgeport, Conn.
Coulter & Mackenzie Co., Bridgeport, Conn.
Crane Company, Bridgeport, Conn.

Derby Mfg. Company, Derby, Conn.
Dicks Garage, Danbury, Conn.
Disco Brothers, Norwich, Conn.

Empress Theatre, Danbury, Conn.

Fillow's Garage, Danbury, Conn.
Fassler & Silberman Warehouse Co., Hartford, Conn.

Goodyear Rubber Co., Middletown, Conn.

Hendey Machine Company, Torrington, Conn.
Halloween Park Building, Stamford, Conn.
Chas. H. Harris, Inc., Norwalk, Conn.
Harvey Hubbell, Inc., Bridgeport, Conn.
Habirshaw Electric Cable Co., Bridgeport, Conn.
C. W. Hall Carriage Co., Bridgeport, Conn.
Helfant's Garage, Norwalk, Conn.

Institution for Savings, Springfield, Mass.
International Casement Co., Jamestown, N. Y.

Kelley Tire and Rubber Co., New Haven, Conn.
Kresge 5c and 10c Store, Stamford, Conn.
Kulle Tobacco Warehouse, Suffield, Conn.
Wm. Krusch Soap Factory, Norwalk, Conn.
Kaplan & Kaplan, Hartford, Conn.

Lake Torpedo Boat Co., Bridgeport, Conn.
A. G. Leake Erecting Co., Bridgeport, Conn.
Locke Steel Chain Co., Bridgeport, Conn.
H. Wales Lines Company, Meriden, Conn.

Max Ams Machine Company, Yonkers, N. Y.
McNiff Garage, Danbury, Conn.
McCathron Boiler Works Co., Bridgeport, Conn.
Monroe Bridge Paper Co., Monroe Bridge, Mass.
George C. Moore Company, Westerly, R. I.
Meekers Union Foundry Co., Norwalk, Conn.
C. J. Mintz, South Norwalk, Conn.
Meyer & Mendelsohn Co., Hartford, Conn.

New Haven Pulp and Board Co., New Haven, Conn.
Nichols Underwear Company, Bridgeport, Conn.
Norwich Woolen Mills, Norwich, Conn.
A. H. Nilson Machine Co., Bridgeport, Conn.
North & Judd Mfg. Co., New Britain, Conn.

Organ Power Company, Hartford, Conn.

Peck McWilliams, Co., Norwich, Conn.
Post Publishing Co., Bridgeport, Conn.
Chas. Parker & Company, Meriden, Conn.
Peck, Stow & Wilcox Co., Southington, Conn.
Portland Foundry Company, Portland, Conn.
Pratt & Whitney Company, Hartford, Conn.

State Street Garage, Bridgeport, Conn.
Station Garage, Stamford, Conn.
Standard Oil Engine Co., Bridgeport, Conn.
Safety Car Heating & Lighting Company, New Haven, Conn.
Spencer Turbine Company, Hartford, Conn.
Stanley Works, New Britain, Conn.
Seamless Rubber Company, New Haven, Conn.

E. W. Thompson, Wallingford, Conn.

University Club, Bridgeport, Conn.
Upson Nut Company, Unionville, Conn.

Whipple & Choate, Bridgeport, Conn.

Compiled By
O'LEARY and PLATT